

CLAIMS

What is claimed is:

1. A pneumatic motor trigger actuator adapted for use with a
5 pneumatic tool comprising:

a trigger housing adapted to engage a pneumatic motor trigger;
a top plate coupled to the trigger housing;

a primary valve coupled to the top plate and having an open
configuration and a closed configuration, the primary valve pneumatically coupled
10 to the trigger housing such that air flow through the primary valve when the
primary valve is in the open configuration enters the trigger housing thereby
engaging the pneumatic motor trigger, the primary valve having a primary switch
and an automatic switch, the primary switch engagable by an operator to
configure the primary valve to the open configuration, and the automatic switch
15 engagable by an object to configure the primary valve to the closed configuration
when a predetermined condition is met.

2. The pneumatic motor trigger actuator of claim 1, further comprising
a secondary valve coupled to the top plate and having an open configuration and
20 a closed configuration, the secondary valve pneumatically coupled to the trigger
housing such that air flow is stopped through the secondary valve when the
secondary valve is configured to the closed configuration, thereby disengaging
the pneumatic motor trigger.

25 3. The pneumatic motor trigger actuator of claim 1, further comprising
a secondary valve coupled to the top plate and having an open configuration and
a closed configuration, the secondary valve pneumatically coupled to the primary
valve such that air flow is stopped through the primary valve when the secondary
valve is configured to the open configuration, thereby disengaging the pneumatic
30 motor trigger.

4. The pneumatic motor trigger actuator of claim 1, wherein the trigger housing and the top plate cooperate to secure the pneumatic motor trigger actuator to a pneumatic tool.

5 5. The pneumatic motor trigger actuator of claim 1, wherein the trigger housing includes a cavity for receiving the pneumatic motor trigger therein.

10 6. The pneumatic motor trigger actuator of claim 4, wherein the trigger housing includes a cylinder that engages the pneumatic motor trigger when air pressure is exerted on the cylinder from the primary valve.

7. A pneumatic tool having an on/off trigger for turning on an internal motor of the tool, the tool comprising:

a pneumatically actuated motor trigger assembly, the assembly including:

5 a housing coupled to the tool;
the valve assembly and the tool being adapted to receive a source of compressed fluid used to drive the tool, the valve assembly having a user engagable component for placing the valve in an open condition to pass said fluid
10 through the valve assembly; and

15 a piston operably associated with the valve assembly and disposed adjacent said on/off trigger and in fluid communication with the valve assembly such that compressed fluid passing through the valve assembly drives the piston into the on/off trigger with sufficient force to urge the on/off trigger into an on position, thereby causing the tool to be turned on.

8. The pneumatic tool of claim 7, wherein the housing includes a trigger housing and a top plate, the trigger housing sized to receive the on/off trigger therein.

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9. The pneumatic tool of claim 8, wherein the trigger housing and the top plate cooperate to secure the housing to the pneumatic tool.

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10. The pneumatic tool of claim 7, wherein the valve assembly includes a primary fluid valve engagable by an operator of the pneumatic tool to allow the compressed fluid to flow to the piston.

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11. The pneumatic tool of claim 7, wherein the valve assembly includes a stop fluid valve engagable by an operator of the pneumatic tool to stop the compressed fluid from flowing to the piston.

12. The pneumatic tool of claim 7, wherein the valve assembly includes an automatic shutoff switch that operates to close the valve assembly such that the compressed fluid does not flow to the piston under predefined conditions.

13. A method for controlling on/off actuation of a pneumatic tool comprising:

providing a compressed fluid to the pneumatic tool;

diverting the compressed fluid through a valve assembly;

5 actuating the valve assembly to a first condition such that the compressed fluid actuates an on/off trigger on the pneumatic tool to turn the pneumatic tool on; and

actuating the valve assembly to a second condition such that the compressed fluid does not actuate the on/off trigger on the pneumatic tool

10 thereby turning the pneumatic tool off.

14. The method of claim 13, wherein actuating the valve assembly to the first condition includes actuating a switch on the valve assembly.

15 15. The method of claim 13, wherein actuating the valve assembly to the second condition includes actuating a switch on the valve assembly.

16. The method of claim 13, wherein actuating the valve assembly to the second condition includes providing a stop switch that automatically actuates
20 the valve assembly to the second condition when predefined conditions are met.

17. The method of claim 16, wherein the pneumatic tool is a pneumatic drill, and the predefined conditions include a predefined drill depth.